

Claims

1. A microarray comprising a plurality of single stranded nucleic acid probes immobilized in discrete areas of a solid support, said probes being
5 hybridised to a library of complexes, wherein each complex comprises an encoded molecule and a template which codes for said molecule, said template comprising a number of codons which codes for chemical entities which upon reaction form a reaction product which at least partly form part of the encoded molecule.
- 10 2. A microarray according to claim 1, wherein the chemical entities are precursors for a structural unit appearing in the encoded molecule.
3. A microarray according to claim 1 or 2, wherein the chemical entities are transferred to the nascent encoded molecule by a building block, which further comprises an anti-codon.
- 15 4. A microarray according to claim 3, wherein the information of the anti-codon is transferred in conjunction with the chemical entity to the nascent complex.
5. A microarray according to any of the claims 1 to 4, wherein the chemical entities are reacted without enzymatic interaction.
- 20 6. A microarray according to any of the claims 1 to 5, wherein the template comprises two or more codons.
7. A microarray according to any of the claims 1 to 6, wherein the nucleic acid probe of the array is hybridised to a template through an adapter oligonucleotide having a sequence complementing the probe as well as
25 the template.
8. A method for preparing a microarray displaying a library of encoded molecules, wherein an oligonucleotide microarray comprising a plurality of single stranded nucleic acid probes immobilized in discrete areas of a solid support is mixed under conditions which allows for specific
30 hybridisation with a library of complexes, each of said complexes comprising an encoded molecule and a template which codes for said molecule, said template comprising a number of codons which codes for

chemical entities which upon reaction form a reaction product which at least partly form part of the encoded molecule.

9. A method for identifying an encoded molecule having a preselected property, comprising the steps of

- 5 i) providing the microarray according to claim 1
 ii) adding a biological sample containing target molecules,
 iii) washing non-bound material off, and
 iv) detecting any bound material in each spot.

10 10. Use of a microarray according to any of the claims 1 to 7 for identifying an
 encoded molecule capable of binding to a target molecule.